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Objectives

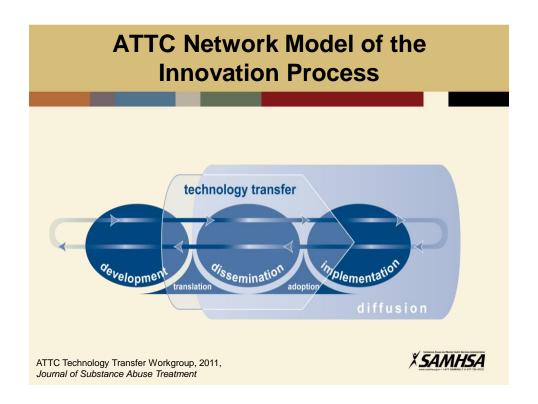
- 1. Define implementation and implementation science
- 2. Understand the *implementation gap*, its relation to treatment fidelity, and its effects on patient outcomes
- 3. Describe strategies from implementation science research to assist with organizational changes and promote the best patient outcomes

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Implementation and Implementation Science

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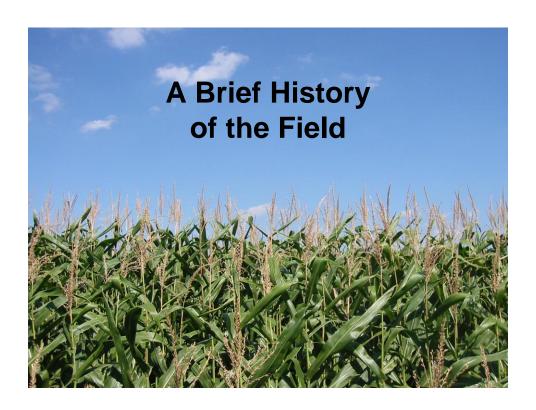


Implementation



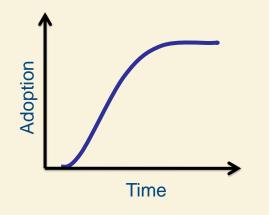
- Incorporating an innovation into routine practice
- Includes a range of strategies to address individual, organizational, and systemic characteristics (e.g., skills training, administrative buy-in, policy changes)

ATTC Technology Transfer Workgroup, 2011, Journal of Substance Abuse Treatment



Everett M. Rogers Diffusion of Innovations

- 1st edition, 1962 5th edition 2003
- Popularized adoption curve
- Focused on diffusion up to decision to adopt
- Identified attributes of innovation that affected adoption



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Implementation Science

- · Combines research across fields
 - Rural sociology
 - · Public health
 - · Communication & marketing
 - Evidence-based medicine
 - · Organizational change
- Studies what strategies can help most efficiently implement innovations and evidence-based practices

Greenhalgh et al., 2004



Implementation Science

- Multiple models and terms
 - CFIR Consolidated Framework for Implementation Research (Damschroder et al., 2009)
 - Implementation Framework (Fixsen et al., 2005)
 - RE-AIM Reach, Effectiveness, Adoption, Implementation, and Maintenance (Glasgow et al., 2001)
 - TCU Program Change Model (Simpson & Flynn, 2007)
- Popular interest: The Tipping Point by Malcolm Gladwell

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The Implementation Gap, Its Relation to Treatment Fidelity, and Its Effects on Patient Outcomes

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The Implementation Gap

Effective Intervention

Ineffective or Insufficient Implementation

Inconsistent; Not Sustainable; Poor Outcomes

State Implementation & Scaling-up of Evidence-based Practices Center http://sisep.fpg.unc.edu/



The Implementation Gap Can Lead to False Conclusions

- Martinson report (1974)
 - · Reviewed research on offender rehabilitation interventions
 - Concluded there were no effective interventions (e.g., psychotherapy, vocational training, work release)
- Panel on Research on Rehabilitative Techniques (Sechrest, White, & Brown, 1979)
 - Only parts of most interventions were implemented, rather than the whole intervention
 - Evaluation of the interventions was not rigorous
 - · Martinson's interpretations were premature and unjustified



What Works

IMPLEMENTATION

INTERVENTION

	Effective	NOT Effective
Effective	Performance Implementation (High Fidelity)	 Paper Implementation Procedure Implementation (Low Fidelity)
NOT Effective		

Fixsen & Blase, 2008



Implementation Gap Example: Assertive Community Treatment (ACT)

 Treating patients with mental health and substance use disorders using a multi-disciplinary team

	Strong Implementation (High Fidelity) ACT team	Weak Implementation (Low Fidelity) ACT team
Treatment Drop-outs	15%	30%
Substance Use in Remission	55%	13%
Hospital Admissions	2.87	4.69

McHugo et al., 1999

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Implementation Gap → Fidelity → Outcomes

Fidelity: How closely an implemented intervention matches the original



Adapted from Wendy Hausotter

Fidelity Case Study: OREOs





What are the key characteristics of this "model" cookie?

Adapted from Wendy Hausotter

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Which of These Represents Fidelity to the Original Model?













Active Ingredients or Core Components

Recipe

- Program structure (e.g., sequence of sessions)
- Program content (e.g., concepts or skills)
- Method of delivery (e.g., group, individual)

Core components must be implemented precisely as intended to achieve demonstrated outcomes.



Adapted from Wendy Hausotter

If You Cook Up Your Own Model...

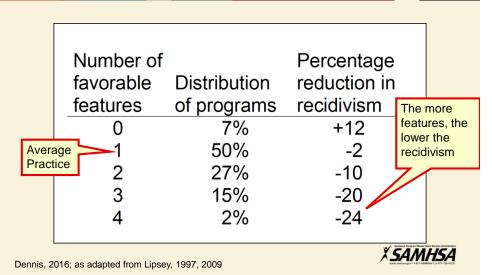
Does it produce the desired outcome? How would you know?



Adapted from Wendy Hausotter



Implementation Gap/Fidelity Example: Effect on Recidivism in 509 Juvenile Justice Studies



Monitoring Fidelity – Quality Assurance

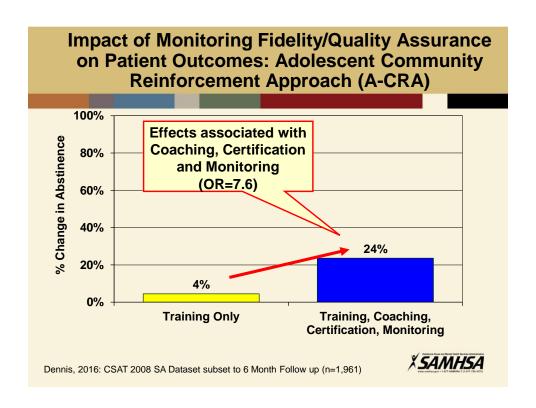
Methods

- Observation (audio, video, inperson) - BEST METHOD
- Practitioner completed checklists
- Patient ratings

Monitoring fidelity promotes fidelity!



Adapted from Wendy Hausotter





"First do it right, then do it differently."

Blase and Fixsen (2005)

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Implementation Science Strategies to Get You Where You Need to Go

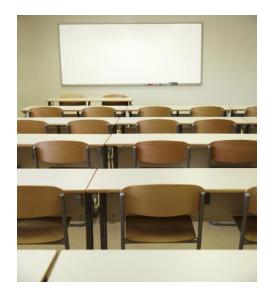
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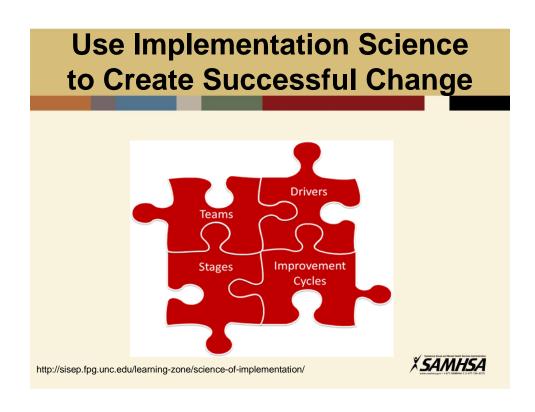
"Passive approaches are generally ineffective and unlikely to result in behavior change" (Grimshaw, 2001)





"Train and hope" doesn't work either (Stilen, 2013)





Create a Successful Implementation Team





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Create a Successful Implementation Team

- Organizational Sponsor
 - Leads implementation effort, appoints Change Agent
 - · Acts as a mentor to maintain enthusiasm
 - Problem-solver, assists Change Agent and Team



Create a Successful Implementation Team

- Organizational Sponsor
- Change Agent
 - Overall responsibility for implementation and planning
 - Supervisory position with responsibility and authority to implement policy and programmatic changes
 - Recognized/respected for leadership, organizational savvy, and persistence



Create a Successful Implementation Team

- Organizational Sponsor
- Change Agent
- Implementation Team
 - · Comprised of staff from all levels/roles
 - · Administrative, Supervisory, Support, Technical, IT
 - · Patients and clients
 - Meets regularly
 - Reviews implementation planning





Implementation Drivers



- Key elements to address
 - Capacity
 - Infrastructure

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/



Training Alone is Never Enough



Study of implementing new education practices in the classroom.

	OUTCOMES (% of Participants)		
TRAINING COMPONENTS	Knowledge	Skill Demonstration	Use in the Classroom
Theory and Discussion	10%	5%	0%

Joyce & Showers, 2002, Designing Training and Peer Coaching: Our needs for learning, VA, USA, ASCD

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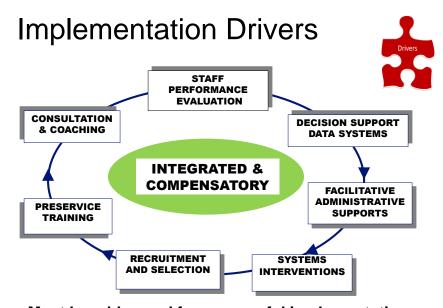


Study of implementing new education practices in the classroom.

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+Demonstration	30%	20%	0%	
+ Practice & Feedback	60%	60%	5%	
+ Coaching in Classroom	95%	95%	95%	

Joyce & Showers, 2002,

Designing Training and Peer Coaching: Our needs for learning, VA, USA, ASCD



Must be addressed for successful implementation

Implementation Research, Fixsen et al., 2005; http://nirn.fpg.unc.edu/

Use Implementation Drivers to Develop an Implementation Plan



Implementation Driver	Implementation Steps	Staff	Deadline
Recruitment/ Staff Selection			
Decision - Support Data Systems			
Training			

Use Implementation Drivers to Develop an Implementation Plan



Implementation Driver	Implementation Steps	Staff	Deadline	
Recruitment/ Staff Selection	Finalize Implementation Team	Change Agent	11/11	
	Meet every 2 weeks through March, then re- evaluate	Team	11/18	
Decision	EMR			
Support Data Systems	Determine issues and system limits with EMR What if only some items are completed? Can all staff complete the screener?	Admin & IT staff	11/15 initial report	
	Targeted training needed for all levels of staff			
Training	Education for nurses on all shifts	Health coach supervisor	11/18	

Improvement Cycles

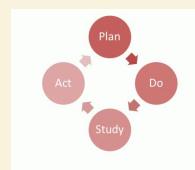


- Manage change
- Keep the focus on what is working

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/



Improvement Cycles





Plan: Plan the change using

the implementation plan

Do: Make the change

Study: Evaluate what happened

Act: Continue or go back to

planning



Implementation Stages



- Multiple stages to every change
- Several months to years

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/



Implementation Stages



Exploration

- Assess needs
- •Examine innovations
- Assess fit
- •Promote "buy in"

Installation

- Acquire resources
- •Create implementation plan
- •Develop infrastructure
- Prepare staff

Initial Implementation

- •Implementation drivers
- Manage change & expectations
- Improvement cycles
- •Learn from mistakes
- Celebrate progress

Full \\ Implementation

- •Implementation drivers
- Monitor outcomes
- Improvement cycles
- •Components integrated
- Fully functioning
- Sustainability

From: http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/



Use Implementation Science to Create Successful Change

- Teams
 - Build an implementation team
- Drivers
 - Training alone is never enough
 - Detailed implementation plan
- Improvement Cycles
 - · PDSA cycles
- Stages
 - · Implementing new practices takes months to years
 - Recognize the change process

http://sisep.fpg.unc.edu/learning-zone/science-of-implementation/



Stages

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